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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,219	07/18/2003	Gregory A. Lochkovic	C0032	2739
21495	7590	04/14/2005	EXAMINER	
CORNING CABLE SYSTEMS LLC			STAHL, MICHAEL J	
P O BOX 489			ART UNIT	PAPER NUMBER
HICKORY, NC 28603			2874	

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/623,219

Applicant(s)

LOCHKOVIC ET AL.

Examiner

Mike Stahl

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AM

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☒ Claim(s) 26 and 27 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/5,9/22,4/21</u> . | 6) <input type="checkbox"/> Other: ____. |

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Claim Objections

Claims 26 and 27 are objected to because they refer to "the ribbon" which is not recited in claim 22. It appears that they should depend from claim 25 instead.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 7-12, 14, 16, 22, 25, 28, 31-32, 34, 38-39, 42-43, and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Lochkovic et al. (US 5561730).

Claim 1: Lochkovic discloses a fiber optic ribbon 13 comprising a plurality of fibers 16 having a core, a cladding, and a coating system 15; and a joining material 12, the joining material connecting the plurality of optical fibers to form a planar structure (fig. 1).

Claim 22: Lochkovic discloses a tube assembly comprising at least one optical waveguide 16 having a core, a cladding, and a coating system 15; and a tube 23, the at least one optical waveguide being disposed within the tube (fig. 2).

Claim 39: Lochkovic discloses a fiber optic cable 30 comprising at least one optical waveguide 16 having a core, a cladding, and a coating system 15; and a jacket 23, the at least one optical waveguide being disposed within the jacket (fig. 2).

Claim 7: The fibers are selected from a group consisting of a multi-mode fiber and a single-mode fiber.

Claim 8: The ribbon **13** is a portion of a ribbon stack **10**.

Claim 9: The ribbon stack **10** is disposed in a tube **23** (fig. 2).

Claim 10: The ribbon is a portion of a dry core.

Claim 31: The tube assembly is a dry tube assembly.

Claim 42: The cable is a dry cable design.

Claims 11 / 32 / 43: The core / tube / cable design includes a dry insert **19**.

Claim 12: The ribbon is a portion of a cable **30**.

Claim 14: The ribbon has a sheath **23** thereover.

Claim 16: The ribbon is a subunit in a larger ribbon assembly.

Claim 25: The at least one optical waveguide **16** is part of a ribbon **13**.

Claims 28 / 45: The at least one optical waveguide has a buffer layer **15**.

Claim 34: The tube assembly forms a portion of a cable **30**.

Claim 38: The cable has at least one strength member **17**.

Claims 1-3, 7-9, 14-16, 22, 25-28, 34, 38-41, and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Mills (US 6064789).

Claim 1: Mills discloses a fiber optic ribbon **14-1** comprising a plurality of fibers **15** having a core, a cladding, and a coating system; and a joining material **19**, the joining material connecting the plurality of optical fibers to form a planar structure (fig. 2).

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Claim 22: Mills discloses a tube assembly comprising at least one optical waveguide **15** having a core, a cladding, and a coating system; and a tube, the at least one optical waveguide being disposed within the tube (fig. 1).

Claim 39: Mills discloses a fiber optic cable comprising at least one optical waveguide **15** having a core, a cladding, and a coating system; and a jacket, the at least one optical waveguide being disposed within the jacket (fig. 1).

Claim 25: The at least one optical waveguide **15** is part of a ribbon **14-1**.

Claims 2 / 26 / 40: The ribbon has a maximum delta attenuation of about 0.050 dB/km or less for a ribbon optical performance test at a reference wavelength of 1550 nm (figs. 13, 15, 17).

Claims 3 / 27 / 41: Although results at a reference wavelength of 850 nm are not reported in Mills, it is considered inherent that the disclosed ribbon has a maximum delta attenuation of about 0.400 dB/km or less for a ribbon optical performance test at a reference wavelength of 850 nm, at least because the ribbon is similar to applicant's ribbon, because the reported delta attenuation values appear to decrease as the wavelength decreases (see figs. 12, 14, 16 for comparative results at 1310 nm), and because the values shown in figs. 12-17 are all significantly below the 0.400 dB/km limit claimed.

Claim 7: The fibers are selected from a group consisting of a multi-mode fiber and a single-mode fiber.

Claim 8: The ribbon **14-1** is a portion of a ribbon stack **40**.

Claim 9: The ribbon stack is disposed in a tube.

Claim 14: The ribbon has a sheath thereover.

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Claim 15: It is considered inherent that the disclosed ribbon has a maximum delta attenuation of about 0.005 dB/km or less during a ribbon temperature performance test at a reference wavelength of 1550 nm, at least because the ribbon is similar to applicant's ribbon.

Claim 16: The ribbon is a subunit in a larger ribbon assembly.

Claims 28 / 45: The at least one optical waveguide has a buffer layer.

Claim 34: The tube assembly forms a portion of a cable.

Claim 38: The cable has at least one strength member.

Claims 1, 4, 7, 19, 22-24, 28-29, 34-35, 38-39, 45, and 48 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki et al. (US 2004/0022510).

Claim 1: Suzuki discloses a fiber optic ribbon **40** comprising a plurality of fibers **4'** having a core, a cladding, and a coating system **2/3**; and a joining material **41**, the joining material connecting the plurality of optical fibers to form a planar structure (figs. 3 and 1A).

Claim 22: Suzuki discloses a tube assembly comprising at least one optical waveguide **4'** having a core, a cladding, and a coating system; and a tube **53**, the at least one optical waveguide being disposed within the tube (fig. 4).

Claim 39: Suzuki discloses a fiber optic cable **50** comprising at least one optical waveguide **4'** having a core, a cladding, and a coating system; and a jacket **53**, the at least one optical waveguide being disposed within the jacket (fig. 4):

Claims 4 / 23 / 24: The plurality of fibers **4'** may further include an ink layer **30** (see fig. 1B). The ink layer is regarded as a further layer with respect to claim 24.

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Claim 7: The fibers are selected from a group consisting of a multi-mode fiber and a single-mode fiber.

Claims 19 / 35 / 48: The coating system includes an inner coating **2** and an outer coating **3**, wherein the inner coating has a Young's modulus of about 1 MPa or less, and the outer coating has a Young's modulus of at least about 1400 MPa or greater (Table 6, comparative example 1, values corresponding to room temperature).

Claims 28 / 45: The layer **52** constitutes a buffer layer relative to the at least one optical waveguide **4'** (fig. 4).

Claim 29: The layer **54** constitutes an interfacial layer between the waveguide **4'** and the buffer layer **52**.

Claim 34: The tube assembly forms a portion of a cable **50**.

Claim 38: The cable has at least one strength member **51**.

Claims 1, 5, 7-9, 12-14, 16, 22, 25, 34, 38-39, and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Travieso et al. (US 5857051).

Claim 1: Travieso discloses a fiber optic ribbon **10** comprising a plurality of fibers **12** having a core, a cladding, and a coating system; and a joining material **18**, the joining material connecting the plurality of optical fibers to form a planar structure (fig. 1).

Claim 22: Travieso discloses a tube assembly **20** comprising at least one optical waveguide **12** having a core, a cladding, and a coating system; and a tube **30**, the at least one optical waveguide being disposed within the tube (fig. 2).

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Claim 39: Travieso discloses a fiber optic cable **50** comprising at least one optical waveguide **12** having a core, a cladding, and a coating system; and a jacket **68**, the at least one optical waveguide being disposed within the jacket (fig. 3).

With regard to each of claims 1, 22, and 39, it is considered inherent that each fiber **12** includes a core, a cladding, and a coating system since virtually all telecommunications fibers include a core and a cladding, since it is common for fibers to include a coating system, and since a coating system would appear to be necessary to avoid transmitting stress from strength members **14/16** to the adjacent fibers. It is noted that the fibers **12** are not the subject of Travieso's invention; accordingly there is no detailed discussion of any core, cladding, or coating for each fiber.

Claims 5 / 46: The joining material **18** / cable **50** are flame-retardant (col. 3 lns. 21-28).

Claim 7: The fibers are selected from a group consisting of a multi-mode fiber and a single-mode fiber.

Claim 8: The ribbon **10** is a portion of a ribbon stack (fig. 2).

Claim 9: The ribbon stack is disposed in a tube **30**.

Claim 12: The ribbon is a portion of a cable **50**.

Claim 13: The cable **50** is flame-retardant.

Claim 14: The ribbon has a sheath **68** thereover.

Claim 16: The ribbon is a subunit in a larger ribbon assembly.

Claim 25: The at least one optical waveguide **12** is part of a ribbon **10**.

Claim 34: The tube assembly forms a portion of a cable **50**.

Claim 38: The cable has at least one strength member **66**.

Claims 1, 4, and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Jackson et al. (US 4900126).

Claim 1: Jackson discloses a fiber optic ribbon **20** comprising a plurality of fibers **22** having a core, a cladding, and a coating system; and a joining material **50**, the joining material connecting the plurality of optical fibers to form a planar structure (fig. 1).

Claim 4: The fibers may further include an ink layer (col. 7 lns. 21-26).

Claim 6: At least one of the optical fibers has applied to its coating system a release agent **55** (fig. 4).

Claim 7: The fibers are selected from a group consisting of a multi-mode fiber and a single-mode fiber.

Claim 8: The ribbon may be a portion of a ribbon stack (fig. 13).

Claims 1, 7, 12, 14, 22, 30, 34, and 38-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmidt (US 6057018).

Claim 1: Schmidt discloses a fiber optic ribbon **14** comprising a plurality of fibers **2** having a core, a cladding, and a coating system **3**; and a joining material **11**, the joining material connecting the plurality of optical fibers to form a planar structure (fig. 2).

Claim 22: Schmidt discloses a tube assembly comprising at least one optical waveguide **4** having a core, a cladding, and a coating system; and a tube **5**, the at least one optical waveguide being disposed within the tube (fig. 1).

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Claim 39: Schmidt discloses a fiber optic cable comprising at least one optical waveguide **4** having a core, a cladding, and a coating system; and a jacket **13**, the at least one optical waveguide being disposed within the jacket (fig. 1).

Claim 7: The fibers are selected from a group consisting of a multi-mode fiber and a single-mode fiber.

Claims 12 / 14: The ribbon **14** may be a portion of the cable (col. 2 lns. 10-11), in which case it would have the sheath **13** thereover.

Claim 30: The tube **5** is formed from a bimodal material (col. 2 lns. 2-3).

Claim 34: The tube assembly forms a portion of a cable (fig. 1).

Claim 38: The cable has at least one strength member **9**.

Claims 1, 4, 6-9, 12, 14, 16-17, 22-25, 34, and 38-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Yang et al. (US 6097866).

Claim 1: Yang discloses a fiber optic ribbon **10** comprising a plurality of fibers **12** having a core, a cladding, and a coating system **14/16**; and a joining material **20**, the joining material connecting the plurality of optical fibers to form a planar structure (fig. 1).

Claim 22: Yang discloses a tube assembly comprising at least one optical waveguide **12** having a core, a cladding, and a coating system **14/16**; and a tube **44**, the at least one optical waveguide being disposed within the tube (fig. 7).

Claim 39: Yang discloses a fiber optic cable **42** comprising at least one optical waveguide **12** having a core, a cladding, and a coating system **14/16**; and a jacket **46**, the at least one optical waveguide being disposed within the jacket (fig. 7).

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Claims 4 / 23 / 24: The fibers may further include an ink layer **18**, which is regarded as a “further layer” within the meaning of claim 24.

Claim 6: At least one of the optical fibers has applied to its coating system a release agent (col. 3 lns. 8-9).

Claim 7: The fibers are selected from a group consisting of a multi-mode fiber and a single-mode fiber.

Claim 8: The ribbon **10** is a portion of a ribbon stack **40**.

Claim 9: The ribbon stack **40** is disposed in a tube **44** (fig. 7).

Claim 12: The ribbon is a portion of a cable **42**.

Claim 14: The ribbon has a sheath **46** thereover.

Claim 16: The ribbon is a subunit in a larger ribbon assembly.

Claim 17: The ribbon has a preferential tear portion **26a/b** (figs. 1-2).

Claim 25: The at least one optical waveguide **12** is part of a ribbon **10**.

Claim 34: The tube assembly forms a portion of a cable **42**.

Claim 38: The cable has at least one strength member **48a/b**.

Claims 22, 24, 28-29, 34, 38-39, and 44-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Fitz et al. (US 6370303).

Claim 22: Fitz discloses a tube assembly comprising at least one optical waveguide **15** having a core, a cladding, and a coating system; and a tube **18**, the at least one optical waveguide being disposed within the tube (fig. 2).

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Claim 39: Fitz discloses a fiber optic cable **10** comprising at least one optical waveguide **15** having a core, a cladding, and a coating system; and a jacket **18**, the at least one optical waveguide being disposed within the jacket (fig. 2).

Claims 24 / 28 / 45: The waveguide includes a further layer **16**, which is a buffer layer.

Claim 29: One of the UV curable coating layers (not shown, col. 5 lns. 17-20) is regarded as an interfacial layer between the waveguide and the buffer layer.

Claim 34: The tube assembly forms a portion of a cable **10**.

Claim 38: The cable has at least one strength member **20**.

Claim 44: The waveguide **15** is a 50 micron multi-mode fiber (col. 5 lns. 14-16).

Claim 46: The cable is flame-retardant (col. 3 lns. 44-46).

Claim 47: The cable is a figure-eight design (see also figs. 3 and 4).

Claims 1, 7-9, 12, 14, 16, 18, 22, 25, 34, 38-39, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Opel et al. (WO 99/17144 A1). US 6496628 corresponds to this publication and is cited on the attached PTO-892 form.

Claim 1: Opel discloses a fiber optic ribbon **RBi** comprising a plurality of fibers **LW** having a core, a cladding, and a coating system; and a joining material **SH**, the joining material connecting the plurality of optical fibers to form a planar structure (fig. 2).

Claim 22: Opel discloses a tube assembly comprising at least one optical waveguide having a core, a cladding, and a coating system; and a tube **AS**, the at least one optical waveguide being disposed within the tube (fig. 4). Note that ribbons **LB** in fig. 4 have the structure shown in fig. 2.

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Claim 39: Opel discloses a fiber optic cable **CA** comprising at least one optical waveguide having a core, a cladding, and a coating system; and a jacket **AS**, the at least one optical waveguide being disposed within the jacket (fig. 4).

Claim 7: The fibers **LW** are selected from a group consisting of a multi-mode fiber and a single-mode fiber.

Claim 8: The ribbon **RB** (or **LB**) is a portion of a ribbon stack **STP**.

Claim 9: The ribbon stack is disposed in a tube.

Claim 12: The ribbon is a portion of a cable.

Claim 14: The ribbon has a sheath thereover.

Claim 16: The ribbon is a subunit in a larger ribbon assembly.

Claims 18 / 44: The fibers **LW** can be 50 micron multi-mode fibers (p. 5 lns. 7-9).

Claim 25: The at least one optical waveguide **LW** is part of a ribbon **RB**.

Claim 34: The tube assembly forms a portion of a cable.

Claim 38: The cable has at least one strength member **CE**.

Claims 1, 7-9, 14, 16, 22, 25, 33-34, and 38-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Cooke et al. (US 5561731).

Claim 1: Cooke discloses a fiber optic ribbon **50** comprising a plurality of fibers **12** having a core, a cladding, and a coating system; and a joining material **11**, the joining material connecting the plurality of optical fibers to form a planar structure (fig. 8).

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Claim 22: Cooke discloses a tube assembly comprising at least one optical waveguide **12** having a core, a cladding, and a coating system; and a tube **21**, the at least one optical waveguide being disposed within the tube.

Claim 39: Cooke discloses a fiber optic cable comprising at least one optical waveguide **12** having a core, a cladding, and a coating system; and a jacket **20**, the at least one optical waveguide being disposed within the jacket.

Claim 7: The fibers are selected from a group consisting of a multi-mode fiber and a single-mode fiber.

Claim 8: The ribbon **11** is a portion of a ribbon stack (fig. 8).

Claim 9: The ribbon stack is disposed in a tube **21**.

Claim 14: The ribbon has a sheath **20** thereover.

Claim 16: The ribbon is a subunit in a larger ribbon assembly.

Claim 25: The at least one optical waveguide **12** is part of a ribbon **50**.

Claim 33: The ribbon packing density exceeds 0.15 for each of the examples given in Table 3 (examples 3, 4, and 5 have densities of 0.47, 0.60, and 0.44 respectively). The density is computed by dividing the area of the ribbon stack by the area enclosed by the outer dimensions of inner tube **21**.

Claim 34: The tube assembly forms a portion of a cable.

Claim 38: The cable has at least one strength member **34**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 20, 36, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lochkovic et al. (cited above) in view of Winningham (US 6563996).

Lochkovic does not specify that the coating system 15 includes an inner coating and an outer coating, and does not describe the composition of the inner coating. Winningham teaches that a coating system comprising an inner coating and an outer coating protects the fiber by virtue of having different physical properties for each coating layer. Winningham also discloses suitable compositions for the inner coating layer; in particular, composition E (Table 1) contains an oligomer (B3731), a hydroxy-functional monomer (SR495) in a concentration of 0.1 to 25% by weight, and a co-monomer (SR504). Composition E is said to yield higher pullout force

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values than similar compositions, which is beneficial in that it resists delamination of the coating layer from the fiber. It would have been obvious to a skilled person at the time the invention was made to have furnished the fibers of the Lochkovic apparatus with a dual coating system including the inner coating taught by Winningham, in order to provide better protection of the fiber (i.e. better than a single coating layer) and to provide beneficial delamination resistance. The proposed combination would have met the requirements of claims 20, 36, and 49.

Claims 21, 37, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lochkovic et al. (cited above) in view of Edwards et al. (US 5416880).

Lochkovic does not specify that the coating system 15 includes an inner coating and an outer coating, and does not describe the composition of the inner coating. Edwards teaches that a coating system comprising an inner coating and an outer coating protects the fiber by virtue of having different physical properties for each coating layer, which is beneficial since it is difficult to obtain all the desired properties in a single coating (col. 1). Edwards also discloses suitable compositions for the outer coating layer; in particular, formulation 11 (Table 4) contains an oligomer (urethane-acrylate preparation 5) in a concentration of less than about 15% by weight, and at least one monomer (isobornyl acrylate). The composition yields a cured film with a relatively high elastic modulus and good thermal stability, both features being desirable in an outer coating layer. Accordingly it would have been obvious to a skilled person at the time the invention was made to have furnished the fibers of the Lochkovic apparatus with a dual coating system including the outer coating taught by Edwards, in order to provide better protection of the

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fiber (i.e. better than a single coating layer) and to achieve the other benefits described by Edwards. The proposed combination would have met the requirements of claims 21, 37, and 50.

Information Disclosure Statement

The information disclosure statements filed April 21 2004 and September 22 2003 appear to be missing pages. In particular, the April 21 statement includes a page labeled "Sheet 1 of 3" but does not contain any pages labeled "Sheet 2 of 3" or "Sheet 3 of 3". The September 22 statement includes "Sheet 1 of 3" and "Sheet 2 of 3" but no "Sheet 3 of 3". It is not known whether these apparently missing sheets were filed and not scanned, or were never actually filed (e.g. due to a sheet numbering left over from a separate filing). If in fact there are three sheets of citations for each of the information disclosure statements mentioned above, the applicant is requested to furnish the missing sheets so that they may be considered.

Initialed copies of the sheets which currently exist in the image file wrapper are attached.

Conclusion

The unapplied references cited on the attached PTO-892 form are considered relevant to applicant's disclosure. US 6671441 and US 6633709 disclose dry cable designs. US 4682850 and US 6035087 disclose temperature tests for various cables. US 6023547 discloses fiber coating compositions. US 4552433 discloses a cable including a 50 micron core multimode fiber.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Stahl at 571-272-2360. Inquiries of a general or clerical

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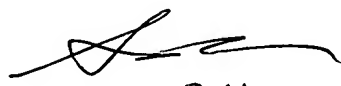
nature (e.g., a request for a missing form or paper, etc.) should be directed to the technical support staff supervisor at 571-272-1626. Official communications which are eligible for submission by facsimile and which pertain to this application may be faxed to 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MSS

Mike Stahl
Patent Examiner
Art Unit 2874

March 30, 2005



Sung Pak
Patent Examiner
AU 2874